determine the clinical course and pathological lesions of the disease. The incubation period of a microbic disease, therefore, is that time which elapses between the initial development of the invading organism in the tissues of the host and the time required for the host to perfect a specific ferment, or perhaps ferments, to break down this alien protein. This brings the mechanism of disease into a distinct relationship with hypersensitiveness of anaphylaxis.

This work is unique and important. It places the mechanism of disease upon a chemical basis. There are two features of the theory, however, which require amplification:

First, it is rather difficult to conceive of ferment activity proceeding rapidly enough *in vivo* to effect the cleavage of the protein molecule necessary to liberate this archon is sufficient amounts within the few minutes which elapse between the injection of protein in the sensitized animal and its death from acute anaphylactic shock.

Secondly, it is not clear how the rapidly fatal septicemias in which death may occur within eighteen hours of the initial infection can be explained upon this theory.

These objections may be purely academic, however, as Vaughan has stated very definitely that much remains to be done before the entire mechanism of disease is finally elucidated. The discussion of the experimental details and the exposition of the theory which is based upon this experimental work is very clear and very direct, and this work marks an important advance in medical science.

A. I. K.

MODERN MEDICINE: ITS THEORY AND PRACTICE. IN ORIGINAL CONTRIBUTIONS BY AMERICAN AND FOREIGN AUTHORS. Edited by SIR WILLIAM OSLER, Bart., M.D., F.R.S., Regius Professor of Medicine in Oxford University, England; Honorary Professor of Medicine in Johns Hopkins University, Baltimore; formerly Professor of Clinical Medicine in the University of Pennsylvania, Philadelphia, and in McGill University, Montreal; and THOMAS MCCRAE, M.D., Professor of Medicine in the Jefferson Medical College, Philadelphia; Fellow of the Royal College of Physicians, London; formerly Associate Professor of Medicine in Johns Hopkins University, Baltimore. In five octavo volumes. Second edition. Vol. I: Pp. 1093; 43 engravings and 33 plates. Vol. II: Pp. 1144; 56 engravings and 20 plates. Philadelphia and New York: Lea & Febiger, 1914.

To those who had the opportunity of observing the widespread enthusiasm and approval that was accorded the first edition of Osler's *Modern Medicine* it will occasion no surprise to learn that less than four years after the last volume of the first edition was published the first volumes of the new second edition have begun to appear. That the entire edition of a great system of medicine in seven volumes should be so rapidly exhausted is a more eloquent tribute to the value and success of the work than any approbation which the pen of a reviewer can ever hope to bestow.

The new edition, of which two volumes have recently been issued, is new in fact as well as in name. Under the able supervision of Sir William Osler and Thomas McCrae, so much rearrangement, revision, and alteration has taken place that the new volumes deserve careful consideration and review. In the preface the editors announce that in the new edition the number of volumes is to be reduced from seven to five. This reduction has been accomplished by increasing the size of the page, augmenting the number of pages in each volume, and by omitting the introductory chapters and historical sections that appeared in the first edition, together with certain articles on subjects that have undergone little or no change during the past few years.

A comparison of the original edition with Volumes I and II of the new edition, shows that radical changes have been made in their contents and arrangement. The new Volume I is devoted to bacterial diseases, infectious diseases of unknown origin, nonbacterial fungus infections, and the mycoses. This virtually was the contents of Volume II and part of Volume III of the first edition. On the other hand, the second volume of the new edition takes up protozoan and metazoan infections, diseases due to physical agents, intoxicants, diseases of metabolism, and constitutional diseases, all of which were discussed in the first volume of the older work; but besides this the new Volume II also includes the section on diseases of the respiratory system, which occupied half of the third volume of the first edition. In short, the range of subjects considered in the first two volumes of the new edition is practically the same as was contained in the first three volumes of the original edition.

To attempt a detailed discussion of the entire contents of these volumes is perhaps unnecessary in view of the fact that the various articles are contributed by practically the same eminent group of collaborators whose names appeared in the earlier edition. Certain features in the new volume are, however, worthy of mention.

In Volume I, Hektoen's admirable article of introduction to the study of infectious diseases furnishes an excellent review of the present-day beliefs on infection and immunity. Typhoid fever is discussed by McCrae in a single chapter almost fifty pages shorter than was his original contribution of five chapters. Such condensation is typical of the new edition, and for the most part has been accomplished by shortening the etiological and pathological considerations. The original articles on lobar pneumonia were written by the late John H. Musser and George W. Norris, whereas the present contribution is more condensed, and is by Norris alone. Three chapters are devoted to tuberculosis. Its history and etiology are discussed by Baldwin, the pathology of tuberculosis by MacCallum, while the clinical aspects of the disease are taken up by Lawrason Brown. In the earlier edition five chapters were devoted to this subject. The new article on toxemia, septicemia, and pyemia is written by R. M. Pearce and J. Harold Austin instead of by the former alone. The chapter on Malta fever, by Sir David Bruce, has been thoroughly revised by George C. Low. In this new volume smallpox, vaccination, chickenpox, scarlet fever, measles, typhus, yellow fever, etc., are grouped respectively under diseases of doubtful or unknown etiology. Councilmann's contributions on smallpox and chickenpox have been revised by E. J. G. Beardsley, and McCollom in his article on scarlet fever has been assisted by Edwin H. Place. Thomas McCrae has revised the article on yellow fever written by the late James Carroll. In this new volume the well-known introductory chapter by Sir William Osler and Professor Adami's contribution on predisposition and immunity are omitted. In spite of this omission the new volume contains 156 pages more than did the first volume of the earlier edition.

In Volume II, under protozoan infections, the chapters by G. N. Calkins on protozoa and that by L. O. Howard on mosquitoes, which appeared in the older edition, have been omitted. The subject of trypanosomiasis by Sir David Bruce has been thoroughly revised by George C. Low. The chapter on relapsing fevers, originally furnished by McCrae, has been entirely rewritten by J. Y. Todd. The chapters written by D. L. Edsall on diseases due to the various mineral and other forms of chemical poisoning have been somewhat altered and revised by Normal B. Gwyn. The section on beriberi has been largely rewritten and an entirely new chapter on pellagra added by K. Heberden Beall. Under metabolic diseases P. B. Hawk's article on general considerations of metabolism replaces the one by Chittenden and Mendel. The entire section on metabolic disorders has been revised and enlarged. The final section of Volume II deals with diseases of the respiratory system. The contributors to this group of articles are the same as in the first edition, with the exception that pneumothorax is discussed by Frederick T. Lord instead of by Walter B. James. This second volume is 316 pages larger than was the original Volume II.

Judged by these two volumes the new edition of Osler's *Modern Medicine* should prove even a more valuable and popular work than did the first edition. Thoroughly revised in every detail, printed in a larger, clearer type, and in fewer volumes, it is safe to predict that, like its predecessor, this edition is destined to occupy a foremost position among the great systems of medicine.

G. M. P.